Palungtar Municipality, Nepal
Situation Analysis for Green Municipal Development

May 2018
Global Green Growth Institute
May 2018

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Recommended citation:

This report is one of a set of seven situation analyses of the Nepalese municipalities of Belkotgadhi, Dakshinkali, Mahalaxmi, Melamchi, Namobuddha, Palungtar and Thaha.
All seven reports are available at www.gggi.org/country/nepal/

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Design and printing by Pentagram, Nepal.

Cover photo of Palungtar by Robic Upadhayay.
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Acknowledgements

This situational analysis and accompanying report were prepared by the Global Green Growth Institute (GGGI) in Nepal under its Green Municipal Development Program. GGGI and the program team would like to express their gratitude to the Ministry of Forests and Environment (MoFE), and in particular to Dr. Bishwa Nath Oli, Secretary, Dr. Ram Prasad Lamsal, Joint-Secretary, and Mr. Ram Hari Pantha, Under-Secretary.

This analysis was undertaken in close coordination with the Ministry of Federal Affairs and General Administration (MoFAGA). GGGI would like to thank MoFAGA for their support and guidance in this work. In particular, appreciation is expressed to Mr. Dinesh Kumar Thapaliya, Secretary, Mr. Suresh Adhikari, Joint-Secretary, Mr. Bishnu Datta Gautam, Under-Secretary, and Mr. Jib Lal Bhusal, Under-Secretary, who provided detailed technical support during the preparation of the seven reports. GGGI would also like to thank the municipal leaders, in particular the mayors and chief administrative officers (CAOs) of each of the municipalities of Belkotgadhi, Dakshinkali, Mahalaxmi, Melamchi, Namobuddha, Palungtar and Thaha municipalities. The mayors and CAOs provided vital qualitative and quantitative input and data which shaped the development of the assessment.

Kirti Joshi undertook field research and focus group discussions, the assessments of individual municipalities and data analysis, and was lead author of the reports. Additional contributions were provided by Aarsi Sagar, Donovan Storey, Vikram Basyal, Anantaa Pandey, and Rowan Fraser of GGGI. The reports were edited by Stephen J. Keeling. Photos were provided by Rameshwor Maharjan and Robic Upadhayay. Design and layout was undertaken by Pentagram.
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Abbreviations and Acronyms

BS          Bikram Sambat (Nepal’s official calendar)
CAO         Chief Administrative Officer
CBO         community-based organization
FY          fiscal year
GGGI        Global Green Growth Institute
GMDP        Green Municipal Development Program
ICT         information and communication technology
LGCDP       Local Governance and Community Development Programme
LPG         liquefied petroleum gas
MoFAGA      Ministry of Federal Affairs and General Administration
MoFALD      Ministry of Federal Affairs and Local Development
NGO         non-governmental organization
NPR         Nepali rupee
NUDS        National Urban Development Strategy
SDG         Sustainable Development Goal
USD         United States dollar
VDC         village development committee
WASH        water, sanitation and hygiene
1. Background

1.1 Urbanization in Nepal
The rapid pace of urbanization in Nepal in recent decades and the recent declaration of many new municipalities has reinforced the need to bring sustainable urban development to the forefront of Nepal's development agenda.

Nepal recorded an average annual urban growth rate of 3.38 percent between 2001 and 2011 (CBS 2014: 31) – one of the highest in Asia, and as of 2011 had 58 municipal governments (metropolitan cities, sub-metropolitan cities and municipalities), which covered 17.1 percent of the population. In recent years the number of municipal governments has increased five-fold with the number standing at 293 in May 2018 including 6 metropolitan cities, 11 sub-metropolitan cities and 276 municipalities (nagarpalikas). These areas now cover about 42% of Nepal’s population (MoUD 2016a).

This situation, alongside the greatly increased levels of authority and the increased funding provided to municipal governments under Nepal’s new federal constitution (2015), set the stage for the planned development of Nepal’s municipal areas.

The development of Nepal’s new municipalities presents many challenges and opportunities. On the one hand, many have neither adequate populations nor adequate economic structures to justify significant infrastructure investments. On the other hand, their early stage of development provides the opportunity to guide them along the path of sustainable development.


1.2 Green Municipal Development Program
Since 2015, the Global Green Growth Institute (GGGI) has supported the Government of Nepal to align its national development policies with the green growth paradigm. This paradigm builds on a model of economic growth that targets the key aspects of economic performance of environmental sustainability, poverty reduction and economic growth (Figure 1).

In 2017, GGGI in partnership with Nepal’s Ministry of Federal Affairs and General Administration (MoFAGA) and seven of Nepal’s new municipalities, launched the Green Municipal Development Program (GMDP). The focal point for the program is the Ministry of Forests and Environment (MoFE). Phase one of the program began in 2017 and will run to December 2018.

The goal of the program is to support the seven municipalities to identify and capture localized green growth opportunities. The program is designed to respond to the needs of federal and local governments and is founded on long-term municipal engagement. It aims to provide a range of customized technical and financial services to the municipalities as well as supporting inter-municipal learning and capacity building.

An initial program activity was the carrying out of a green municipal growth situation analysis in the seven partner municipalities of Belkotgadhi, Dakshinkali, Mahalaxmi, Melamchi, Namobuddha, Palungtar, and Thaha, which are shown in Figure 2. This report is one of a series of seven reports that present the findings of the analysis for Palungtar Municipality in Gorkha District.

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1 It is important to note here that the recent increases in the number of municipal governments have mainly been outcomes of political decisions and many parts of the new municipalities have more rural than urban characteristics.

Economic Growth
• Economic growth can only be sustained through investment – not exploitation
• Urban competitiveness is undermined by ‘unliveable’ cities
• ‘Going green’ supports innovation in services, technologies and systems: it moves a city from ‘old’ to ‘new’ economies & thinking

Poverty Reduction
• Social inclusion and reduced inequality support sustainable resource use & growth
• Green Cities should provide more resilient livelihoods/higher quality of life than business as usual

Environmental Sustainability
• Urban growth & prosperity can only be based on sustainable use of healthy natural resources
• Environmental degradation is costly and undermines urban resilience

Figure 1: GGGI’s Green Growth concept
Source: GGGI 2017a

Figure 2: Location of the seven GMDP partner municipalities (with province numbers)
1.3 Objectives
The objectives of the situation analysis of the seven new municipalities were as follows:

- Analyze and assess the current baseline and trends in the municipalities across economic, social and environmental dimensions, and understand the deeper reasons and drivers of change.
- Analyze and assess the policy and regulatory landscape in which the municipalities operate.
- Analyze and assess the institutional, technical, managerial and financial structure and capacity of the municipal administrations.
- Identify and formulate practical, operational and strategic findings based on the assessment.
- Advise on priority sectors, policy and planning interventions and possible projects that could be pursued to support green growth in the municipalities with GGGI inputs and consultations.
- Conduct a stakeholder assessment of the findings at national and municipal levels.

1.4 Methodology
This situation analysis report was prepared through the following steps and inputs:

- Studied secondary information about the municipality from authentic sources, which were verified by consulting other sources to the extent possible.
- Held discussions with the Mayor Mr. T.P. Sharma Timilsina and his team on 15 October 2017 at the municipal office guided by a list of research questions (see Annex 1 for questions and Annex 2 for meeting minutes.)
- Held focus group discussions with local entrepreneurs (members of Namobuddha Chamber of Commerce and Industry) at their office and organizations affiliated with social and environmental NGOs (see Annex 3 for participants in discussions).
- Shared preliminary findings at the GMDP Launch and First National Consultation Workshop on 14–15 November 2017 in Kathmandu in the presence of high-level officials from partner ministries, the mayors and the chief administrative officers (CAOs) of partner municipalities, and representatives from other relevant ministries.
- GGGI Nepal and Headquarter teams reviewed final drafts of the report.

Discussion with members of local Chamber of Commerce and Industry and NGO activists at their office in Palungtar.
Opening session of GMDP Launch and First National Consultation Workshop (above). Palungtar Mayor Deepak Kandel speaking at the program (below).
2. Green Municipal Development in Nepal

2.1 Overview

‘Green growth’ is a model of economic growth that targets the key aspects of economic performance of poverty reduction, job creation, social inclusion and environmental sustainability (see Figure 1). In other words, green municipal growth aims to ensure that investments on infrastructure and other types of physical development create socioeconomic benefits that are proportionately distributed in societies while ensuring that development does not result in environmental degradation. The green growth concept builds on the concept of sustainable development.

The commitments of the Government of Nepal to sustainable development are explained in Section 1.1. Among these, Nepal’s National Report for Habitat III (MoUD 2016b) builds on the country’s commitment to Sustainable Development Goal 11 of making cities and human settlements inclusive, safe, resilient and sustainable by 2030. The sustainable development of Nepal’s urban areas is also key to enabling Nepal to achieve its aim of graduating from Least Developed Country to Middle-Income Country status by 2030, for which cities have a major role to play as engines of economic growth.

Nepal’s National Urban Development Strategy (2017-2031) has the five underlying and interconnected guiding principles of inclusivity, resilience, green development and efficiency (Table 1).

Table 1: Guiding principles of National Urban Development Strategy, Nepal (2017-2031)

<table>
<thead>
<tr>
<th>Guiding principles</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Inclusivity</strong></td>
<td>Urban areas should be socially inclusive in terms of ethnicity, caste, gender, and economic class. Inclusion should be reflected in the space the city provides for the nurturing and celebration of social and cultural diversity and sensitivity particularly to disadvantaged, marginalized and minority groups, and poor people and youth in general. Inclusivity promotes social justice and contributes to equity and balanced development. The increasing rates of poverty in urban areas mean that their development needs to be pro-poor in terms of addressing the poor’s basic needs for education, health, housing, livelihoods and transportation.</td>
</tr>
<tr>
<td><strong>Resilience</strong></td>
<td>Resilience refers to physical and social resilience to make urban areas safer and adaptable to environmental and economic change. The major focus should be on physical, social, economic and institutional resilience, which are pivotal for mitigating short and long-term vulnerability resulting from disasters and the regional and global impacts of climate change. Planning and urban development should enhance the capacity of urban areas to cope with different types of hazards and to absorb shocks and risks.</td>
</tr>
<tr>
<td><strong>Green development</strong></td>
<td>Strategies for urban development should be guided by keeping urban areas green, cool, and wet. The main thrust should be on saving, protecting and promoting greenery including green parks, green open spaces, urban agriculture and forests. Urban areas should promote low carbon emission land use and technology and the use of green materials, increase the use of alternative energy, reduce the effects of urban heat islands and lower ambient temperatures. They should also promote and protect clean water bodies (ponds, wells, rivers and canals) that contribute to the survival of aquatic life, urban biodiversity and the recharging of ground water.</td>
</tr>
<tr>
<td><strong>Efficiency</strong></td>
<td>Urban areas need to be efficient, well governed and effectively managed to become sustainable, inclusive, resilient and green. The strategy should therefore be guided by i) enhancing the capability and technical competence of local governments, ii) the institutionalization of transparency and accountability in urban planning and development processes, and iii) the citizen-oriented delivery of services and development outcomes</td>
</tr>
</tbody>
</table>

Source: MoUD 2017
Many of Nepal’s new municipalities are predominantly rural in character. Most have limited technical capacity and have only limited funds. Given their limited resources, a fundamental question for Nepal’s new municipalities is whether they should focus on large-scale projects or on creating livable communities.

Many of Nepal’s municipalities are rich in terms of natural resources and need to avoid a business as usual path of haphazard urbanization, which has predominantly occurred so far across most of South Asia development. The green growth concept offers an alternative approach to urban development by stressing the optimal and wise use of local resources for sustainable and inclusive economic development through public participation. There is immense scope for green urban development in Nepal, and the time is right to promote this as municipalities gear up to exercise their newly acquired executive powers following the recent establishment of a federal system of governance in Nepal.

2.2 Green Urban Growth for Nepal
The characteristics and the transformations needed to produce green urban areas are listed in Boxes 1 and 2. The realization of such green urban areas will make a very large contribution to the achievement of Nepal’s national development goals, including the Sustainable Development Goals and its ‘Nationally Determined Contributions’ to reduce greenhouse gas emissions.

Box 1: The characteristics of green urban areas
In line with the green growth paradigm, green urban areas are:
- innovative and smart
- resource efficient and low carbon
- climate smart and resilient
- prosperous and bankable
- healthy and livable
- inclusive and pro-poor (GGGI 2017b).

Box 2: The transformations needed to produce green urban areas
- Transform the way they plan, to achieve the vision of smart, green and sustainable urban areas. Unplanned growth has negative environmental consequences that can be avoided by creating well-informed urban plans.
- Transform the way they design and operate buildings, to achieve resource efficient, low carbon and disaster-proof built environments.
- Transform the energy they produce and consume, to shift away from using polluting fossil fuels to cleaner forms of renewable energy.
- Transform waste to resources, to close the waste and resources loop and to move towards circular economies.
- Transform water resource management, to improve access to clean water and sanitation.
- Transform the way people move and connect, to achieve connected and non-motorized cities to limit the use of fossil fuel-based transportation.
- Balance expansion and growth with inclusion, to move to inclusive and pro-poor urban areas.
- Transform the way urban areas manage and account for their assets, to create bankable and creditworthy cities that attract green finance.
As Nepal’s municipalities urbanize, they have the option to follow either the business-as-usual pathway of haphazard and environmentally damaging growth or to shift to a green growth development trajectory. The green growth pathway has the three components of environmental sustainability, economic growth and poverty reduction:

**Environmental sustainability**
Urban growth and prosperity should be based on the sustainable use of natural resources. Nepal’s new municipalities have the opportunity to avoid unplanned urbanization and instead use existing tools and knowledge to better plan their development and their use of natural resources. This is very important for Nepal, which is situated in a vulnerable mountain ecosystem and is very prone to earthquakes, floods, landslides and other natural disasters and the impacts of climate change. These factors and the impacts of large scale human settlements and widespread migration are key factors in Nepal’s development trajectory. The current high rate of urbanization is leading to large-scale environmental degradation, which has high costs and undermines urban resilience. In addition, compact, coordinated and connected urbanization is challenging to achieve in Nepal because of the limited availability of land across hill and mountain areas.

**Economic growth**
Sustainable economic growth needs sustained and planned investment. Urban areas not only need to aim for sustainable economic growth by generating economic activity, but also need to focus on strengthening their financial resources. Municipal finance is one area that needs further attention in the context of financing urban infrastructure improvements.

There are many challenges for developing the infrastructure of Nepal’s municipalities, which primarily rely on the state and central governments for their funding:
- **The devolution of power:** The legal and policy barriers to municipalities accessing other sources of financing.
- **Creditworthiness:** Most urban areas lack creditworthiness to raise debt in national and international markets.
- **Access to international finance:** Nepal’s urban areas currently have limited access to international financing.
- **Own sources of revenue:** Municipal bodies are responsible for providing basic public services including street lighting, water, sanitation and other services, but have limited capacity to generate funds to pay for them.
- **Valuation of assets:** Municipal governments are unsure how to manage and optimize increased asset values through infrastructure investments.
- **Capacity building:** The limited capacity and awareness of municipal bodies to design and implement revenue generation and integration tools.
- **Earthquake damage:** The basic services infrastructure of the areas covered by the seven municipalities was badly damaged by the April–May 2015 earthquakes.

The adoption of a green growth pathway will support innovation in municipal services, technologies and systems, especially for municipalities that are embarking on the urbanization process.

**Poverty reduction**
As cities develop, inclusive green urban growth becomes a vital component for achieving inclusive, sustainable and efficient urbanization. Social inclusion is an important aspect of the current municipality structure in Nepal and one of the elected positions in municipalities is for a person from a disadvantaged group. Gender equality is promoted in municipal bodies including by the stipulation in the Local Level Electoral Act (2017) that either the mayor or deputy mayor is a woman. In pursuing green growth Nepal’s municipalities should promote and facilitate resilient livelihoods and an improved quality of life.

### 2.3 International Policy Drivers
Two major international policy instruments are particularly relevant for the promotion of green urban development in Nepal:

**Nationally Determined Contributions** — The following Nationally Determined Contributions (NDCs) that Nepal submitted to the United Nations Framework Convention on Climate Change (UNFCCC) under the Paris Agreement (2016) emphasize sustainable and green urbanization:
- “Promote economic development through low carbon emissions with a focus on (i) energy, (ii) agriculture, (iii) forests, (iv) industry, (v) human settlements and waste, (vi) transport and (vii) commercial sectors.”
- “Maintain 40 per cent of the total area of the country under forest cover.”

**Sustainable Development Goals** – SDG 11 is to “Make cities and human settlements inclusive, safe, resilient and sustainable.” The following SDG targets are most relevant to the development of Nepal’s municipalities:
- **Target 11.3:** “By 2030, enhance inclusive and sustainable urbanization and capacity for participatory, integrated and sustainable human settlement planning and management in all countries.”
- **Target 11.B:** “By 2020, substantially increase the number of cities and human settlements adopting and implementing integrated policies and plans towards inclusion, resource efficiency, mitigation and adaptation to climate change, resilience to disasters, and develop and implement, in line with the Sendai Framework for Disaster Risk Reduction 2015–2030, holistic disaster risk management at all levels.”
PART 2: BASELINE SITUATION AND TRENDS

3. Basic Information

3.1 Location, Formation and Administrative Sub-Divisions

Palungtar Municipality is located in the southwest of Gorkha District in Province 4 (Figure 2). It covers an area of 158.6 km². It was first formed in 2015/16 by amalgamating Aanpipal, Chyangli, Gaikhur, and Palungtar village development committees (VDCs), and was expanded in 2016/17 by adding Dhunwakot, Khoplang and Mirkot VDCs to form Palungtar Municipality in its present form.

The municipality lies about 144 km west of the capital city Kathmandu and is accessible via the Prithivi Highway that runs between Mugling and Pokhara (Figure 4).

The municipality is divided into 10 wards (see Figure 5 and Table 2) with wards 9 and 7 having the largest areas. Ward 5 has the highest population density and is home to the municipal center and office at Thantipokhari.

Figure 3: Location map of Palungtar Municipality
Source: CDNDoGM 2016/17
Figure 4: Route from Kathmandu to Palungtar via Anbu Khaireni Chowk

Figure 5: Wards of Palungtar Municipality
Source: (CDNDoGM 2016/17)
3.2 Demography

**Population growth and trends** – In 2011, the population of the current municipal area (the 7 VDCs) was 37,177. Between 1991 and 2001 the population grew by an average of 1.25% per year adding 4,940 persons overall while the 2001 to 2011 period saw a reduction of 3,943 in the population with all VDCs losing population. The recent empowerment of municipalities as local governments makes it likely that the population will have grown by the next census in 2021. The population will cross the 50,000 mark by 2029 if it grows at an annual rate of 1.5% while a lower growth rate of 0.5% per year will lead to the 2031 municipal population reaching the level it was in 2001 (Figure 6).

**Table 2: Erstwhile VDCs and current municipal wards – Palungtar Municipality**

<table>
<thead>
<tr>
<th>Erstwhile VDCs &amp; municipality</th>
<th>Current ward no.</th>
<th>Population 2011</th>
<th>Area (km$^2$)</th>
<th>Pop. density, 2011 (persons/km$^2$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Khoplang VDC</td>
<td>1</td>
<td>3,669</td>
<td>13.36</td>
<td>275</td>
</tr>
<tr>
<td>Khoplang VDC</td>
<td>2</td>
<td>4,243</td>
<td>18.51</td>
<td>229</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>3</td>
<td>3,327</td>
<td>16.13</td>
<td>206</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>4</td>
<td>4,161</td>
<td>15.37</td>
<td>271</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>5</td>
<td>3,508</td>
<td>5.9</td>
<td>595</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>6</td>
<td>4,605</td>
<td>19.72</td>
<td>234</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>7</td>
<td>5,141</td>
<td>21.81</td>
<td>236</td>
</tr>
<tr>
<td>Palungtar Municipality*</td>
<td>8</td>
<td>2,728</td>
<td>11.2</td>
<td>244</td>
</tr>
<tr>
<td>Dhuwakot VDC</td>
<td>9</td>
<td>4,279</td>
<td>22.11</td>
<td>194</td>
</tr>
<tr>
<td>Mirkot VDC</td>
<td>10</td>
<td>2,513</td>
<td>14.51</td>
<td>173</td>
</tr>
<tr>
<td><strong>Totals</strong></td>
<td></td>
<td><strong>38,174</strong></td>
<td><strong>158.62</strong></td>
<td><strong>241</strong></td>
</tr>
</tbody>
</table>

Sources: CDNDoGM 2016/17 for population. Note: * The erstwhile Palungtar Municipality consisted of Aanpipal, Chyangli, Gaikhur and Palungtar VDCs

**Figure 6: Population growth and projection, 1991–2031 – Palungtar Municipality**

Age – In 2011, 69% of the population were from the economically active age group (15–59 years) (Table 3). This high proportion is an economic advantage. The low sex ratio of 63 men to 100 women in the economically active age group suggests that many men were living away from home for work. This emphasizes the need to focus on the economic empowerment of working age females.

Caste and ethnicity – It is important to know the caste and ethnic makeup of an area as different ethnic groups have different perceptions, stakes and interests. It is important that all groups are fairly represented and provided with opportunities under the principle of social inclusion. In 2011, Palungtar Municipality had a homogeneous ethnic mix with 16.3% Chhetris, 13.4% hill Brahmans, 10.3% Kumal and 10.2% Sarkis.

Literacy – The adult literacy rate in 2011 was 69.2% with 62% of females and 79% of males literate.

3.3 Land Use and Urban Growth Patterns
Palungtar Municipality lies in a hilly region with steep terrain and some flat lands such as shown in Figure 7. The growth of settlements has increased in recent years on the flat lands especially after the construction of the road linking Palungtar with the Prithivi Highway. Forested area decreased from 34% of the municipality in 1994 (Figure 8) to 27% in 2017 (Figure 9).

3.4 Market Centers
Thantipokhari bazaar, also known as Palungtar bazaar, is the main market center of the municipality where people from the rural hinterlands come to sell their agricultural produce and people from the surrounding areas come to buy food and household goods.
3.5 Places of Attraction
Besides its beautiful landscape and scenic views, Palungtar is famous historically. It is where the erstwhile Nepal royal family the Shah Dynasty began after Drabya Shah, brother of then King Narbupal Shah of neighboring Lamjung District, established a small kingdom after winning the race organized to appoint the local king. The race ended at the famous hill top of Liglig Kot.

![Figure 8: Land use map of Palungtar Municipality, 1994](source: DoS 1994)

![Figure 9: Forest map — Palungtar Municipality, 2017](source: DoFRS 2017)
4. Environment and Natural Resources

Forests – In 2017 about 7.9 km² (about 27%) of the municipal area was forested (Figure 9). Some forests are private forests.
5. Economy

Farming is the main traditional occupation in the area with many households engaged in dairy and livestock production. Parts of wards 6, 7 and 8 have been developed as pocket areas for litchi and banana farming. Palungtar exports fruits worth NPR 40–50 million (USD 0.38–0.48 million) per year.
6. Infrastructure, Facilities and Basic Services

6.1 Housing
Houses are an important asset that indicate their owners’ economic status. The 2011 national census (CBS 2012) reported the following for Palungtar Municipality:

- Of the 9,924 households in the municipality, about 95% lived in their own houses while 3.5% rented accommodation. The low share of renters suggests a low level of economic activities in the area.
- Most households (about 90%) lived in houses with outer walls of mud-bonded bricks or stones. However, in the relatively urbanized area such as the erstwhile Palungtar VDC, about 19% of households lived in houses with outer walls of cement bonded bricks or stones. About 92% of households lived in houses with foundations of mud bonded bricks or stones.
- Most houses had galvanized iron rooves.

6.2 Roads and Transportation
Palungtar Municipality is easily accessible from the capital city Kathmandu via the Prithivi Highway and a connecting all-weather road. It is also well connected with the neighboring districts of Lamjung and Tanahun via motorable roads. The main bus park is at Thantipokhari bazaar with direct buses services to Kathmandu.

6.3 Other Services
The following data is from the 2011 national census (CBS 2012):

**Drinking water** – In 2011, 58% of households had taps or piped drinking water supplies. Taps and piped water supplies were highest in Dhunwakot (75%) and Gaikhur (84%). Spouts and wells were other important sources of drinking water. More than 30% of households in Aanipal and Khoplang relied on spouts for most of their water while an average of 23% of households in Chyangi and Mirkot used uncovered wells and a third of the households in Palungtar VDC relied on covered wells.

**Cooking fuel** – In 2011, about 86.5% of households used firewood as their primary cooking fuel. About 11% of households in Dhunwakot VDC and 10% of Palungtar VDC households used biogas for cooking while 19% of Palungtar VDC households used LPG.

**Lighting** – Electricity was the main source of lighting for about 88% of households in 2011. However, kerosene was used by 12% of households with 20% of households in Dhunwakot using it for lighting.

**Toilets** – In 2011, a quarter of households in Palungtar Municipality did not have toilets. The situation was worse in Chyangi where 44.5% did not have toilets.

**Waste management** – Palungtar is in the early phase of urbanization and has no systematic waste management. New houses are mostly built with toilets and septic tanks.

**Education and health care** – There are 12 higher secondary school and colleges and 7 health posts in Palungtar Municipality.
Local Level Governance Act – The basis for the functioning of local governments (municipalities and rural municipalities [gaunpalika]) were established by the promulgation of the Local Level Governance Act, 2017. The act, which was formulated in accordance with the Constitution of Nepal, 2015, grants local governments significant legislative, executive and judicial rights. The act gives local legislatures the power to formulate local laws in line with federal level legislation, while local judiciaries can decide cases related to irrigation, daily wages, pastures and other issues.

The act gives local governments the authority to manage teachers, staff and education up to the basic level (Grade 8) and to oversee basic health care. They can set up their own police forces, issue land ownership certificates, collect revenue on property, and register births, deaths and marriages. They can also levy taxes on house rent, entertainment, property and tourism.

Municipal plans and policies – Following the promulgation of the Local Government Act (2017), Palungtar Municipality formulated the following rules:

- The Municipal Executive (Work Division) Rules, 2074 BS define the responsibilities and duties of (i) the mayor, deputy mayor, ward chairperson and other members, (ii) thematic sections, sub-sections and units of the municipal executive office and (iii) ward committees.
- The Municipal Executive (Work Performance) Rules, 2074 BS define the processes for executing tasks to be performed by the mayor, deputy mayor, other elected representatives and the Municipal Executive Office.

Palungtar Municipality unveiled its policies and programs related to the following subjects through its budget and program for FY 2074/75 (2018/19):

- Settlement and urban planning
- Environment, land conservation, disaster management, and water supply and sanitation
- Social development and mobilization
- Agriculture and livestock
- Irrigation
- Good governance and service delivery
- Sports tourism and income generation.

The Government of Nepal recently announced an ambitious plan to develop Palungtar Municipality as a Smart City.
8. Municipal Institutions and Capacity

8.1 Organizational Setup
The previous VDC-wise setup has become redundant following state restructuring under the new federal system. Under earlier guidelines prepared by MoFALD, the municipality formed the following six thematic committees, chaired by the Mayor, to enhance the performance of the Municipality’s executive:

- Economic Development Committee
- Social Development Committee
- Infrastructure Development Committee
- Environment and Disaster Management Committee
- Legal Committee.

8.2 Technical and Physical Capacity
The municipal office operates in two new buildings and one old building located within the premises of the municipality, both at Thatipokhari. The office suffers from a shortage of space and technical staff given that the workload has increased many times since the creation of the erstwhile Palungtar Municipality in 2015/16. The technical workforce consists of one engineer and three sub-engineers. The municipality’s website is at http://www.palungtarmun.gov.np/en
9. Municipal Finances and Revenue

Palungtar Municipality proposed a budget of NPR 409,616,000 for FY 2017/18 (Table 4). Capital expenditure is expected to be four times recurrent expenditure implying a focus on infrastructure development.

Table 4: Palungtar Municipality’s estimated budget for FY 2017/18 (FY 2074/75 BS)

<table>
<thead>
<tr>
<th>Particulars</th>
<th>NPR ('000)</th>
<th>USD ('000)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Financial equalization</td>
<td>217,913</td>
<td>2,115.66</td>
</tr>
<tr>
<td>1.1 Recurrent</td>
<td>44,500</td>
<td>432.04</td>
</tr>
<tr>
<td>1.2 Capital</td>
<td>173,413</td>
<td>1,683.62</td>
</tr>
<tr>
<td>2. Internal income</td>
<td>11,500</td>
<td>111.65</td>
</tr>
<tr>
<td>2.1 Recurrent</td>
<td>2,875</td>
<td>27.91</td>
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<tr>
<td>2.2 Capital</td>
<td>8,625</td>
<td>83.74</td>
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<tr>
<td>3. Saving fund</td>
<td>8,430</td>
<td>81.85</td>
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<tr>
<td>4. Total capital (1.2 + 2.2 + 3)</td>
<td>190,468</td>
<td>1,849.20</td>
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<tr>
<td>5. Total recurrent (1.1 + 2.1)</td>
<td>47,375</td>
<td>459.95</td>
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<tr>
<td>6. Total conditional grant</td>
<td>171,773</td>
<td>1,667.70</td>
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<tr>
<td>Total budget (1+2+3+6)</td>
<td>409,616</td>
<td>3,976.85</td>
</tr>
</tbody>
</table>

Source: Municipal Office. Note: 1 USD = NPR 103 (approx.)
10. Municipal Stakeholders and Groups

The main potential stakeholders for implementing the Green Municipal Development Program in Palungtar Municipality are listed in Table 5. The business community will be instrumental in sharing the costs of projects. The NGOs will play an important role in implementing social components while grassroot level community-based organizations (CBOs) will help mobilize local people.

Table 5: Potential GMDP stakeholders – Palungtar Municipality

<table>
<thead>
<tr>
<th>Category</th>
<th>Stakeholders</th>
</tr>
</thead>
<tbody>
<tr>
<td>Business community</td>
<td>Individual entrepreneurs</td>
</tr>
<tr>
<td>NGOs and INGOs (sector)</td>
<td>Nepal Red Cross Society, BHYC, World Vision International Nepal, ERDCN, Sewa Nepal</td>
</tr>
<tr>
<td>Community-based organizations</td>
<td>Tole (neighborhood) improvement committees, women’s groups</td>
</tr>
</tbody>
</table>

Source: Municipal Office and focus group discussions
Palungtar is a new municipality. The area’s varied topography, geography and climatic conditions provide opportunities for tourism and agriculture (particularly fruit farming). One of the area’s greatest competitive advantages is its geographical location between the country’s largest and second largest urban areas of the Kathmandu and Pokhara Valleys.

To harness its tourism potential, the natural environment needs to be protected – particularly from the haphazard construction of physical infrastructure and particularly roads. To capitalize on its agricultural potential, including for fruit farming, the area needs to adopt more commercial farming, take smart decisions on what to grow where and establish market nodes and links. It is also necessary to ensure that the fruits of development are proportionately distributed to the people in line with the spirit of socioeconomic inclusion.

11.1 Sustainable Infrastructure Development
The haphazard construction of roads without proper alignment, design, and sympathy to environmental concerns is rampant across Nepal and Palungtar Municipality is no exception. Constructing roads, particularly in difficult terrain, is expensive and maintenance even more so. Although roads are important for development, the scattered nature of settlements in the municipality raises questions to what extent road accessibility should or can be provided.

Palungtar lies adjacent to three clean rivers. The sustainable use of water resources (including natural springs) would fulfil the water needs of the municipality.

There is scope for solar farming to provide an alternative source of energy for cooking and lighting in areas unserved by the National Grid.
12. Policy and Planning Recommendations

Palungtar Municipality needs to invest in soft initiatives such as plans and policies as well as hard initiatives such as projects. The municipality is preparing several municipal plans. It needs to prepare all the plans and byelaws listed in Table 6 to underpin and regulate its development. These initiatives are an opportunity to integrate green growth concept and principles into the area’s development.

Technical and logistic support to municipal staff – Palungtar is a new municipality with limited human resources and needs technical and logistic support to prepare and implement its plans. Given its large area and many scattered settlements, the availability of technical human resources is inadequate to meet the potential and growing work load. The technical and logistic support needed by the municipality, which could be provided under GMDP at least in the short run, is as follows.

• Supplementary technical human resources: Although the municipal office plans to create additional positions for technical human resources, external support in the form of short or mid-term engineering or planning staff would go a long way to build the municipality’s capacity for sustainable urbanization based on green growth principles. As engineers are not usually trained to address urbanization issues, the municipality’s technical team should have an urban planner.

• Trainings and exposure visits for the mayoral team on urban management: The mayor and other elected representatives are not necessarily skilled as managers but need managerial skills to carry out their jobs. They also need to keep updated about current urban challenges and practices to be able to address them. Likewise, the municipality’s chief administrative officer (formerly executive officers) have important roles as they are advisors to the mayor, and as urban area managers.

• Trainings and exposure visits for municipal staff: Municipal staff need to update their skills and knowledge from time to time to learn about ways to address emerging issues – particularly about sustainable urbanization and green growth.

• ICT support: Improved service delivery through information and communication technology (ICT)-based applications including interconnectivity between municipal office and ward offices would promote time-saving and environment-friendly ways of doing business and managing urban areas. An IT-based platform could be created whereby municipal officials could respond to problems posted online or reported through mobile apps by residents.
<table>
<thead>
<tr>
<th>Plans</th>
<th>Objectives</th>
<th>Components</th>
</tr>
</thead>
</table>
| (1) Comprehensive town development plan | To realize the municipal vision and priorities by promoting infrastructure development that proceeds with green growth potentials and concerns, and to promote planned urbanization. | a. Baseline mapping  
b. Twenty-year perspective plan guided by structural land use plan considering the trend of urban growth and land use change  
c. A Multi-sector Investment Plan of short to mid-term infrastructure and socio-economic projects (5–7 years)  
d. Measures to integrate the following companion plans that will be prepared separately:  
   i. Risk sensitive land use plan  
   ii. Municipal transport master plan  
   iii. Tourism master plan  
   iv. Environment preservation master plan including natural resource management plan  
   v. Municipal finance plan |
| (2) Risk sensitive land use plan | To ensure safe housing while promoting local architecture; to ensure safety from floods, landslides, and climatic risks; and to prevent river pollution | a. Multi-hazard risk assessment (including climate risks) and zoning  
b. Slope and watershed analysis  
c. Byelaws on setbacks from rivers and streams |
| (3) Building byelaws | To control population density, ensure space for mobility, and preserve traditional architecture | a. Setback, ground coverage, height, and floor area ratio  
b. Guidelines for buildings in traditional settlements of Dapcha |
| (4) Municipal transport master plan | To ensure efficient and effective mobility within the municipality and to and from neighboring areas | a. Twenty-year road construction and connectivity plan  
b. Integrated land use  
c. Transport options  
d. Traffic management including road safety  
e. Parking management |
| (5) Tourism master plan | To harness the municipality’s tourism potential, attract private investment and address poverty in underserved areas (e.g., through homestay programs) | a. List potential investment projects  
b. Identify sites, activities and costs for homestay programs, ecotourism and other community-based tourism programs  
c. Map tourism potential areas and activities  
d. Market and promote the area’s tourist attractions |
| (6) Environment protection master plan including natural resource management plan | To protect environmentally sensitive areas and promote environment-friendly practices | a. An inventory of natural resources including forests and public lands  
b. An inventory of flora and fauna  
c. Mapping of environmentally sensitive areas  
d. The zoning of natural resources and land  
e. The management of river mining  
f. Solid waste management  
g. Landslide and soil erosion prevention and reduction  
h. The prevention of air, water, soil and noise pollution  
i. The management of urban parks and recreational areas and activities |
| (7) Municipal finance plan | To improve and increase revenue collection, explore new avenues for revenue generation and optimize investment and expenditures ensuring value for money | a. Long-term planning and budgeting  
b. Review tax rates and service fees  
c. Identify revenue sources  
d. A procurement plan  
e. Asset management  
f. A GIS-based information system documenting firms, businesses and other tax paying entities in the municipality  
g. A GIS-based land information system (with data on land ownership, area, plot number and size, land price and location) |
The Green Municipal Development Program is identifying potential infrastructure projects for prioritization and support based on their economic, social and environmental worth. In discussions with local stakeholders the project identified 12 types of projects that would benefit the municipality (see Annex 4). Further discussions with local stakeholders identified the following five projects as the ones with the greatest potential.

**Project 1. Sustainable water supply schemes**

**Description:** Many parts of Palungtar suffer from a shortage of drinking water. However, the Chepe, Daroundi and Marsyangdi rivers run within or alongside the municipality and are mostly unpolluted. Also, the natural spring sources that occur at higher altitudes need to be preserved.

**Objective:** Ensure sustainable water supplies for households across the municipality.

**Activities**
1. Provide water supplies by pumping water from the Daroundi river and the other two rivers
2. Conserve springs and other water sources
3. Promote rainwater harvesting by households and institutions
4. Form community water user groups to manage local water sources
5. Build check dams and earthen dams to collect water from rivers
6. Install rainwater harvesting systems.

**Project 2. Strengthening the urban economy by promoting tourism**

**Description:** Palungtar’s great tourism potential needs harnessing to bring unserved and underserved areas into mainstream development by creating economic opportunities and improving basic services. Tourism activities should be integrated with improving basic services such as water supply and sanitation through homestay, ecotourism and agro-tourism programs in targeted locations and communities. Linking tourism-promoting activities with water supply and sanitation improvements and the development of entrepreneurship skills will improve living standards.

**Objective:** Create and strengthen livelihood options by promoting place and activity-based tourism.

**Activities**
1. Develop trekking routes to the historic Liglig Kot (fort) with the provision of basic services including safe drinking water, public toilet, tea-shops, and eateries along the way.
2. Promote homestay programs, eco-tourism, and agro-tourism in appropriate areas focusing on marginalized communities and areas and run awareness programs on hospitality and sanitation.
3. Promote and support cultural activities such as the Liglig Kot race
4. Promote educational tours and eco-heritage walks
5. Promote local products (food, souvenirs) by mobilizing women and marginalized groups.
6. Mobilize local youth for tourism-promoting activities and entrepreneurship.

**Project 3. The commercialization of agriculture for urban use**

**Description:** The municipality has dedicated pocket areas for growing litchis and bananas and there is scope for vegetable and cardamom farming. Water-deficient areas can also be used for growing drought-resistant crops for human consumption and grass for livestock. This produce and its by-products can be sold to local markets and supplied to neighboring urban centers. New markets and consumers should be identified and developed.

**Objective:** Increase the commercial viability of agriculture and develop market opportunities for local agricultural produce.
Activities
1. Identify pocket areas for growing crops as per climatic conditions
2. Expand irrigation facilities through water management such as by building retention ponds
3. Establish cold storage facilities
4. Establish markets (physical structures) in each ward
5. Train farmers and agro-entrepreneurs
6. Develop a brand for local agricultural produce
7. Run business development and promotion activities.

Project 4: Solar farming
Description: Palungtar receives plenty of sunlight throughout the year, which leaves scope for solar farming. Solar farming would most benefit households that use kerosene for lighting and are unserved by the National Grid. And surplus power can be sold to the National Grid generating revenue for the municipality. (Note that the municipality is in talks with the Alternative Energy Promotion Center and other parties for technical support for installing solar power.)

Objective: Produce power from solar farming to serve areas unserved by the National Grid and generate revenue from the sale of surplus power.

Activities
• Install solar farms (photovoltaic power station) at appropriate sites
• Subsidize the installation of solar panels at household level in unserved areas such as Dhunwakot

Project 5: Integrated waste water management
Description: With increasing urbanization, waste water management is becoming a thorny issue. Presently, septic tanks are the only active component of fecal sludge management in urbanized areas of Palungtar. Encouraging the large-scale adoption of on-site treatment such as septic tanks would relieve pressure on future centralized wastewater treatment systems and lower associated construction costs, including the cost of large-scale sewer systems. Septic tanks are funded by house owners at no cost to municipalities. However, it is difficult to achieve economies of scale when building individual septic tanks; and most septic tanks are not properly designed or constructed. The best way is to opt for both short-run (e.g., septic tanks) and long-run solutions (wastewater treatment plants). There is the need for a wastewater treatment plant that would also produce biogas and compost fertilizer, as is happening in a plant in Dhulikhel nearby Kathmandu (see Box 3).

Objective: Manage fecal sludge at household- and municipality-levels in an environment-friendly and integrated way.

Activities
1. Build a wastewater treatment plant with a biogas reactor at a suitable location in the municipality
2. Provide technical support for the design and construction of septic tanks via a help-desk in the municipal office
3. Run awareness programs on the design and construction of septic tanks.

Box 3: Examples of good waste management practices from Nepal

Wastewater treatment – Nepal’s first large-scale community-based wastewater treatment plant and biogas reactor has recently been set up at Shreekhandapur in Dhuskikhel Municipality. It treats the wastewater of 200 households and produces biogas for cooking for 60 families. Solid waste is separated and sent to two biogas reactors. Liquid waste is sent to reed bed treatment plants and the digested sludge can be used as compost fertilizer.

Waste into energy – Kathmandu Metropolitan City has launched a pilot project to convert waste into energy with a sample production of 14 KWs of electricity from a biomethanation plant at Téku, Kathmandu. The Alternative Energy Promotion Centre has also initiated large scale biogas projects including one in Bhairahawa with a capacity of 3,700 cubic meters that produces one large tanker of LPG per day. This conversion of waste to energy could be replicated in other parts of the country.
14. Conclusions

This report presents a situation analysis of Palungtar Municipality based on secondary information and discussions with the mayoral team and other stakeholders. Five potential projects have been identified building on discussions and consultations with the mayoral team. Additional inputs came from discussions with local stakeholders that helped explore and understand additional dimensions to make the project concepts more socioeconomically attractive and environmentally responsible. A list of recommendations was also prepared on planning and policy making.
References


Annex 1 – Research Questions

Note: Green growth is defined as a model of economic growth that targets key aspects of economic performance including poverty reduction, job creation, social inclusion and environmental sustainability.

Annex 1.1 Meeting with the mayor and his or her team
1. You lead a new municipality. What is your vision for the municipality, and the priorities for your tenure? What are the technical (e.g., staff) and physical barriers (e.g., office space) faced by your office?

2. In terms of infrastructure development, how do you evaluate the status of the municipality? Where do your priorities lie and why?

3. Although infrastructure development generally tops the list of municipal priorities (and this is because the majority of public demands are related to infrastructure), there are now equally important concerns about economic development, social inclusion and environmental sustainability.

3.1 What are the economic potentials in the municipality, and to what extent have these been harnessed? What are the challenges?

3.2 Socially and economically diverse groups live in the municipality. How does such diversity reflect in terms of public demands you receive, and how do you (plan to) ensure social inclusion in the planning and delivery of municipal services?

3.3 Infrastructure development often takes place at the cost of environmental losses. To what extent have you been successful in balancing the use of natural resources while implementing infrastructure projects? What are the key challenges?

4. The Green Municipality Development Program (GMDP) aims to promote green growth. How would you define the scope of GMDP in this municipality? What should be the priority projects?

5. Would you share your top 5 project ideas for your tenure in terms of priority? Why are these the priorities?

Annex 1.2 Focus group discussion with business community/private sector
1. Please explain your work and engagement in this municipality.

2. What are the business and economic opportunities you see in the municipality? What are the challenges or barriers?

3. What are the opportunities for public-private partnerships, and what has been the response of the municipality and government agencies to the possibility of partnering with your organization?

4. There are limited examples where the private sector works on green growth. How do you plan to change this? What related support do you expect from the municipality?

5. What are your key projects and initiatives for the next 5 years with or without collaboration with the municipalities?
6. The Green Municipality Development Program (GMDP) promotes green growth. How would you define the scope of the program in this municipality? What should be priority projects?

Annex 1.3: Focus group discussion with NGO and CBO leaders
1. Please explain your work and engagement in this municipality.

2. What are the major social development gaps in this municipality? What were some past initiatives to address them, and to what extent were they successful?

3. Do you think the existing (infrastructure) projects have helped to reduce social disparities (including economic disparities)? Please give examples of successful projects as well as failures.

4. How do you judge the role of the municipality in promoting social inclusion in the municipality? What do you expect from the municipality?

5. What are your key projects and initiatives for the next 5 years with or without collaboration with the municipalities?

6. The Green Municipality Development Program (GMDP) promotes green growth. How would you define the scope of GMDP in this municipality from the perspective of working with the NGO and CBO sector? What should be priority projects?

Annex 1.4 Focus group discussion with environmental organizations and activists
1. Please explain your work and engagement in this municipality.

2. What are the major environmental problems and issues in this municipality? What are the past initiatives to address them, and to what extent have these been successful?

3. Do you think that existing infrastructure projects have been effective in taking care of the environment? Can you give examples of successful projects as well as failures?

4. How do you judge the role of the municipality in promoting environmental sustainability in the municipality? What related support for this do you expect from the municipality?

5. What are your key projects and initiatives for the next 5 years with or without collaboration with the municipalities?

6. Have any of your environment concerns been mainstreamed into the municipality’s planning? Where do you see the opportunities to do this?

7. The Green Municipality Development Program (GMDP) promotes green growth. How would you define the scope of GMDP in this municipality from the perspective of working with environmental organizations and communities in this municipality? What should be priority projects?
Annex 2 – Minutes of Meeting with Mayoral Team (9 November 2017)
Annex 3 – Participants in Focus Group Discussions (9 December 2017)

### Green Municipal Development Program
**FGD with Business Community/Private Sector**

**Date:** 09 November 2017  
**Venue:** Belanger Municipal Office

<table>
<thead>
<tr>
<th>SN.</th>
<th>Name of the Participants</th>
<th>Designation</th>
<th>Organizations / Firms</th>
<th>Phone No.</th>
<th>Email address</th>
<th>Signature</th>
</tr>
</thead>
<tbody>
<tr>
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<td>Anu Anderson</td>
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<td>2.</td>
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<tr>
<td>3.</td>
<td>Rajkumar Patel</td>
<td>Vice President</td>
<td></td>
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<tr>
<td>4.</td>
<td>Ashish Datta</td>
<td>Vice President</td>
<td></td>
<td>9256058432</td>
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</table>

### Green Municipal Development Program
**FGD with NGO/CBO Leaders and Environmental Organizations/Activists**

**Date:** 09 November 2017  
**Venue:** Belanger Municipal Office

<table>
<thead>
<tr>
<th>SN.</th>
<th>Name of the Participants</th>
<th>Designation</th>
<th>Organizations / Firms</th>
<th>Phone No.</th>
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<tbody>
<tr>
<td>1.</td>
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### Annex 4 – Projects Ideas from Municipal Consultations (November 2017)

<table>
<thead>
<tr>
<th>Project Ideas</th>
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<tbody>
<tr>
<td>1. Water supply schemes</td>
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<tr>
<td>2. Reservoir system for irrigation</td>
</tr>
<tr>
<td>3. Commercial agriculture and livestock farming</td>
</tr>
<tr>
<td>4. Agricultural roads</td>
</tr>
<tr>
<td>5. The scientific and sustainable management of community forests</td>
</tr>
<tr>
<td>6. Tourism development</td>
</tr>
<tr>
<td>7. Solar mini grids on barren lands connected to the National Grid</td>
</tr>
<tr>
<td>8. Pocket areas for fruit production</td>
</tr>
<tr>
<td>9. Improved dairy production</td>
</tr>
<tr>
<td>10. Home-based green industries</td>
</tr>
<tr>
<td>11. Education hub</td>
</tr>
<tr>
<td>12. Sports tourism</td>
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</tbody>
</table>
This report is one of a set of seven situation analyses of the Nepalese municipalities of Belkotgadhi, Dakshinkali, Mahalaxmi, Melamchi, Namobuddha, Palungtar and Thaha.

All seven reports are available at www.gggi.org/country/nepal/